

What is claimed is:

1. An interactive consumer marketing system comprising:
  - a) a wireless data collecting device for use by a customer at home or within a shopping establishment, said wireless data collecting device including a scanner for reading identification codes on products of interest and a memory for storing a product list;
  - b) a comprehensive database for storing information relating to products available for purchase within the shopping establishment; and
  - c) an intermediate consumer presentation device, comprising
    - i) a communications link for communicating with the wireless data collecting device and the comprehensive database;
    - ii) a data aggregator for correlating the products on the product list and the information stored in the comprehensive database;
    - iii) a display for presenting to the consumer an enhanced presentation of products on the product list and information stored in the comprehensive database.
2. The system of claim 1 wherein the intermediate consumer presentation device is secured to a shopping cart.
3. The system of claim 1 wherein display on the intermediate consumer presentation device is at least 6" by 6".

4. The system of claim 1 further comprising a location tracking agent for determining the approximate location of the intermediate consumer presentation device.

5. The system of claim 1 further comprising a messaging agent for providing messages to the display of the intermediate consumer presentation device.

6. The system of claim 1 wherein the enhanced presentation includes indications of which products on the product list are available at a discounted rate.

7. The system of claim 1 wherein the enhanced presentation includes only products that are offered for sale by the shopping establishment.

8. The system of claim 1 wherein the enhanced presentation includes a sorting of the product list according to the layout of the shopping establishment.

9. The system of claim 1 wherein the product list is generated by the consumer at the home.

10. A system for marketing products to a customer in a shopping establishment comprising:

- a wireless network for the bi-directional communication of data;
- a wireless shopping device, said wireless shopping device having
  - a reader for registering a product identification number;
  - a display for displaying said message;
- a customer database containing data relating to at least one shopping behavior characteristic of the customer, wherein said data relating to at

least one shopping behavior characteristic of the customer is modified in real time as the customer registers product identification numbers with said wireless shopping device; and

d) a host computer associated with the shopping establishment having access to said customer database, said host computer having

- i) a communication link for receiving the product identification numbers registered by the wireless shopping device;
- ii) a message selector for selecting said message, said message being correlated to said shopping behavior characteristic; and
- iii) a message sending agent for communicating said message via the communication link to said wireless shopping device.

11. The system of claim 10 further comprising a location tracking agent for determining the approximate location of the wireless shopping device.
12. The system of claim 11 wherein the location tracking agent determines the location of the customer by
  - a) accessing a product location database containing data representing products available for sale and a location identifier associated with said available products and

b) determining the location identifier associated with the product registered by the wireless shopping device.

13. The system of claim 10 wherein the host computer has access to a database that stores the customer's preferred payment method.

14. The system of claim 10 wherein the host computer has access to a database that stores information about a credit account associated with the customer and wherein the credit account is automatically charged when the customer completes his product selection.

15. The system of claim 10 wherein the wireless shopping device is removably secured to a shopping cart.

16. The system of claim 10 further comprising a remote computer having a communication link for communicating over said wireless network.

17. The system of claim 16 wherein said remote computer is associated with the customer's home, said remote computer having a docking station for communicating with said wireless shopping device.

18. The system of claim 16 wherein said remote computer is associated with a manufacturer or distributor.

19. The system of claim 10 further comprising a kiosk associated with a store, said kiosk having a communications link for communicating with said wireless shopping device.

20. The system of claim 19 wherein said kiosk uploads information stored in said wireless shopping device.

21. The system of claim 19 wherein said kiosk downloads information to said wireless shopping device.

22. A system for marketing products to a customer in a shopping establishment comprising:

- a) a wireless network for the bi-directional communication of data;
- b) a first shopping device and a second shopping device, said first shopping device having
  - i) a reader for registering a product identification number; and
  - ii) a transmitter for communicating said product identification number to said second shopping device;

said second shopping device having

- i) a latching mechanism for securing said second shopping device to a shopping cart;
- ii) a receiver for receiving said product identification number from said first shopping device;
- iii) a radio for receiving a message over said wireless network and for communicating said product identification number over said wireless network; and
- iv) a display for displaying said message;

- c) a product profile database containing an identification number for a plurality of products, wherein each identification number includes

correlation data linking said identification number with one or more correlated products; and

d) a host computer associated with the shopping establishment having access to said product profile database, said host computer having:

- i) a communication link for receiving the product identification number registered by the first shopping device;
- ii) a message selector for selecting said message, said message relating to the one or more correlated products corresponding to the identification number registered by the first shopping device; and
- iii) a message sending agent for communicating said message via the communication link to said first shopping device.

23. The system of claim 22 further comprising a location tracking agent for determining the approximate location of the customer.

24. The system of claim 23 wherein the product profile database contains a location identifier associated with the plurality of products and wherein after a customer scans a product the location tracking agent determines the location of the customer by

- a) accessing the product profile database and
- b) determining the location identifier associated with the product registered by the wireless shopping device.

25. The system of claim 22 wherein the host computer has access to a database that stores information about a credit account associated with the customer and wherein the credit account is automatically charged when the customer completes his product selection.

26. The system of claim 22 further comprising a remote computer having a communication link for communicating over said wireless network.

27. The system of claim 26 wherein said remote computer is associated with the customer's home, said remote computer having a docking station for communicating with said wireless shopping device.

28. The system of claim 26 wherein said remote computer is associated with a manufacturer or distributor.

29. The system of claim 22 further comprising a kiosk associated with a store, said kiosk having a communications link for communicating over said wireless network.

30. The system of claim 22 further comprising a kiosk associated with a store, said kiosk having a communications link for communicating with said first shopping device.

31. The system of claim 30 wherein said kiosk uploads information stored in said first shopping device.

32. The system of claim 30 wherein said kiosk downloads information to said first shopping device.

33. A system for enabling a customer to shop for products offered for sale by a merchant, the system being operable within a store associated with the merchant and at a location remote from the merchant's store, the system comprising:

- a) a wireless network for the bi-directional communication of data;
- b) a wireless shopping device capable of operating in an in store mode and an out of store mode, said wireless shopping device having
  - i) a reader for registering product identification numbers;
  - ii) a radio for receiving a message over said wireless network and for communicating said product identification numbers over said wireless network; and
  - iii) a display for displaying said message;
- c) a host computer associated with the merchant having
  - i) a communication link for receiving the product identification numbers registered by the wireless shopping device;
  - ii) a message selector for selecting said message to send to the wireless shopping device;
  - iii) a message sending agent for communicating said message via the communication link to said wireless shopping device;

wherein when the wireless shopping device is operating in the out of store mode, the wireless shopping device requests that the customer select a delivery method

for products associated with said product identification numbers transmitted from the wireless shopping device to the host computer and wherein when the wireless shopping device is operating in the in store mode, the wireless shopping device does not request that the customer select a delivery method.

34. The system of claim 33 wherein said message selector selects said message based on the output of an inference engine.
35. The system of claim 33 wherein said message selector selects said message based at least partly on chance.
36. A system for marketing products to a customer in a shopping establishment comprising:
  - a) a shopping device having
    - i) a reader for registering a product identification number;
    - ii) a communications port;
    - iii) a memory for storing a customer identification code; and
    - iv) a display for displaying messages;
  - b) a kiosk for linking with the communications port of said shopping device;
  - c) a host computer associated with the shopping establishment having access to a customer database, said customer database including information about the customer, said host computer having

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- i) a communication link for receiving the customer identification code of the customer and for communicating with the shopping device via the kiosk; and
- ii) a message selector for selecting messages to download to the shopping device, at least one of said messages being correlated to said information about the customer identified by the customer identification code; and

d) a triggering agent for triggering the display of one of said selected messages on the shopping device.

37. The system of claim 36 wherein said kiosk links with said shopping device via a wireless communication link.

38. The system of claim 36 wherein said kiosk uploads information from said shopping device.

39. The system of claim 36 wherein said kiosk uploads recipes from said shopping device.

40. The system of claim 36 wherein said kiosk downloads to the shopping device an aisle sorted shopping list.

41. The system of claim 36 wherein the display of said one of said selected messages is triggered in response to the customer registering a product with said shopping device.

42. The system of claim 36 wherein the display of said one of said selected messages is triggered in response to the location of the customer.

43. The system of claim 36 wherein the display of said one of said selected messages is triggered in response to the time of day.

44. A system for marketing products to a customer in a shopping establishment comprising:

- a) a shopping device having
  - i) a reader for registering a product identification number;
  - ii) a communications port;
  - iii) a memory for storing a customer identification code; and
  - iv) a display for displaying messages;
- b) a kiosk for linking with the communications port of said shopping device;
- c) a host computer associated with the shopping establishment having access to a product database, said product database including a product identification number for a plurality of products and product correlation data linking said product identification number with one or more correlated products, said host computer having
  - i) a communication link for receiving the customer identification code of the customer and for communicating with the shopping device via the kiosk; and
  - ii) a message selector for selecting messages to download to the shopping device; and

d) a triggering agent for triggering the display of one of said selected messages on the shopping device, said selected message containing information about one of the products correlated to the product identification number registered by the shopping device.

45. The system of claim 44 wherein said kiosk links with said shopping device via a wireless communication link.

46. The system of claim 44 wherein said kiosk uploads information from said shopping device.

47. The system of claim 44 wherein said kiosk uploads recipes from said shopping device.

48. The system of claim 44 wherein said kiosk downloads to the shopping device an aisle sorted shopping list.

49. The system of claim 44 wherein the display of said one of said selected messages is triggered in response to the customer registering a product with said shopping device.

50. The system of claim 44 wherein the display of said one of said selected messages is triggered in response to the location of the customer.

51. The system of claim 44 wherein the display of said one of said selected messages is triggered in response to the time of day.

52. A system for marketing products to a customer in a shopping establishment comprising:

52. A system for displaying messages, comprising:  
a) a customer database containing data relating to at least one shopping behavior characteristic of the customer;  
b) a shopping device having  
i) a reader for registering a product identification number;  
ii) a communications port;  
iii) a memory for storing a customer identification code; and  
iv) a display for displaying messages;  
c) a cradle for linking with the communications port of said shopping device;  
d) a host computer associated with the shopping establishment having access to said customer database, said host computer having  
i) a communication link for receiving the customer identification code of the customer and for communicating with the shopping device via the cradle; and  
ii) a message selector for selecting messages to download to the shopping device, at least one of said messages being correlated to said shopping behavior characteristic of the customer identified by the customer identification code; and  
e) a triggering agent for triggering the display of one of said selected messages on the shopping device.

53. The system of claim 52 wherein the cradle is integrated into a kiosk.

54. The system of claim 53 wherein the kiosk is located at an end cap within the shopping establishment.

55. The system of claim 52 wherein the display of said one of said selected messages is triggered in response to the customer registering a product with said shopping device.

56. The system of claim 52 wherein the display of said one of said selected messages is triggered in response to the location of the customer.

57. A system for marketing products to a customer in a shopping establishment comprising:

- a) a product profile database containing a product identification number for a plurality of products, wherein each product identification number includes correlation data linking said product identification number with one or more correlated products;
- b) a shopping device having
  - i) a reader for registering a product identification number;
  - ii) a communications port;
  - iii) a memory for storing a customer identification code; and
  - iv) a display for displaying messages;
- c) a cradle for linking with the communications port of said shopping device;
- d) a host computer associated with the shopping establishment having access to said product profile database, said host computer having

i) a communication link for receiving the customer identification code of the customer and for communicating with the shopping device via the cradle; and

    ii) a message selector for selecting messages to download to the shopping device; and

    e) a triggering agent for triggering the display of one of said selected messages on the shopping device, said selected message containing information about one of the products correlated to the product identification number registered by the shopping device.

58. The system of claim 57 wherein the cradle is integrated into a kiosk.

59. The system of claim 58 wherein the kiosk is located at an end cap within the shopping establishment.

60. The system of claim 57 wherein the display of said one of said selected messages is triggered in response to the customer registering a product with said shopping device.

61. The system of claim 57 wherein the display of said one of said selected messages is triggered in response to the location of the customer.

62. A system for marketing products available for sale by a merchant to a customer, the system comprising:

    a) a wide area network for the bi-directional communication of data;

b) a remote terminal associated with the customer, said remote terminal having:

- i) a communication link for communicating over said wide area network
- ii) a graphical user interface for displaying graphical representations of the products available for sale by the merchant, wherein said graphical representations are arranged according to virtual aisles and virtual shelves, and for displaying messages promoting the products on the virtual aisles;
- iii) a product selector for allowing the customer to select which products the customer would like to purchase;

c) a host computer associated with the merchant, said host computer having access to a customer database containing information about the customer, and further having:

- i) a communications link for communicating over said wide area network, wherein said host computer can receive a customer identification code sent from the remote terminal;
- ii) a message selector for selecting the promotional messages to send to the remote terminal, at least one of said messages being correlated to said information about the customer identified by the customer identification code.

63. The system of claim 62 wherein said graphical representations are three dimensional.

64. The system of claim 62 wherein the product selector is a computer mouse.

65. A method for a manufacturer or distributor to manage inventory of a product through an indirect sales entity, wherein the manufacturer or distributor has access to a host computer and wherein a plurality of consumers utilizing the indirect sales entity each have a wireless shopping device, the method comprising the steps of:

- a) determining an inventory surplus quantity of the product based at least partly on sales of the product;
- b) calculating, as a function of said inventory surplus quantity, a discount to offer to the consumers; and
- c) transmitting said discount to said wireless shopping device wherein said wireless shopping device notifies the consumer of said discount.

66. The method of claim 65 further including the step of determining consumer responsiveness data based at least partly on sales of the product.

67. The method of claim 66 further including the step of transmitting to said host computer said consumer responsiveness data.

68. The method of claim 66 further including the step of calculating an adjusted discount as a function of said consumer responsiveness data.

69. The method of claim 65 wherein an expiration date of the product is a factor in said calculating step.

70. A method for a store to manage inventory of a product, wherein the store has access to a host computer and wherein a plurality of consumers each have a wireless shopping device, the method comprising the steps of:

- determining an inventory surplus quantity of the product based at least partly on sales of the product;
- calculating, as a function of said inventory surplus quantity, a discount to offer to the consumers; and
- transmitting said discount from said host computer to a first wireless shopping device wherein said first wireless shopping device notifies the consumer of said discount.

71. The method of claim 70 further including the step of determining consumer responsiveness data based at least partly on sales of the product.

72. The method of claim 71 further including the step of transmitting to said host computer said consumer responsiveness data.

73. The method of claim 71 further including the step of calculating an adjusted discount as a function of said consumer responsiveness data.

74. The method of claim 70 wherein an expiration date of the product is a factor in said calculating step.

75. A method for marketing products to a plurality of customers in a shopping establishment wherein the customers each use a wireless shopping device for registering a product identification code on selected products, the method comprising the steps of:

- a) classifying the customers according to a behavior category, said behavior category being based upon products selected for purchase by the customers;
- b) maintaining a database containing data relating to said behavior category;
- c) associating a message with said behavior category;
- d) transmitting said message to said wireless shopping device of the customers that are classified as being within said behavior category according to said data maintained in said database;
- e) monitoring the customer selected products in real time;
- f) modifying said database in response to said monitoring step.

76. The method of claim 75 wherein said modifying step comprises changing the behavior category of the customers.

77. The method of claim 75 wherein the wireless shopping device comprises:

- a) a first handheld device having a reader for registering the product identification code; and
- b) a second device having a video display secured to a shopping cart.

78. The method of claim 75 wherein said behavior category relates to whether the customer has young children.

79. The method of claim 75 wherein said behavior category relates to the types of food the customer purchases.

80. A method of marketing products to a customer in a shopping establishment wherein the customer uses a wireless shopping device for registering a product identification code on selected products, said wireless shopping device being capable of receiving promotional messages relating to products offered for sale, the method comprising the steps of:

- a) calculating a message control value, said message control value being used to determine whether to send a message to the customer;
- b) comparing said message control value to a threshold level;
- c) displaying said message on said wireless shopping device if said message control value is below said threshold level;
- d) monitoring the customer's response to said message displayed on said wireless shopping device; and
- e) adjusting said message control value in response to said monitoring step.

81. The method of claim 80 wherein said adjusting step comprises increasing said message control value if said customer does not register the product identification code for the product associated with the message within a predetermined time.

82. The method of claim 80 wherein said adjusting step comprises decreasing said message control value if said customer registers the product identification code for the product associated with the message.

83. The method of claim 80 wherein said threshold level is based at least in part on the customer's input as to the number of messages the customer would like to receive.

84. The method of claim 80 wherein said customer receives a discount based upon the setting of the threshold level.

85. A method of shopping in a shopping establishment wherein a customer uses a wireless shopping device, the method comprising the steps of:

- a) storing an electronic shopping list on said wireless shopping device, said electronic shopping list comprising a list of products the customer would like to purchase;
- b) providing a host computer associated with the shopping establishment, said host computer having access to an inventory list comprising a list of products available for purchase from the shopping establishment;
- c) providing a communication link between said wireless shopping device and said host computer;
- d) generating a product availability list comprised of products that are common to both said electronic shopping list and said inventory list; and
- e) providing said product availability list to the customer.

86. The method of claim 85 wherein said communication link between said wireless shopping device and said host computer is created by coupling said wireless shopping device to a kiosk.

87. The method of claim 85 wherein said host computer downloads messages to said wireless shopping device, said messages being correlated to the products on said electronic shopping list.

88. The method of claim 85 wherein said host computer accesses said electronic shopping list stored in said wireless shopping device.

89. The method of claim 85 wherein said wireless shopping device accesses said inventory list.

90. The method of claim 85 wherein the order of the products in said product availability list is correlated to the layout of the shopping establishment.

91. The method of claim 85 further comprising the step of providing to the customer information useful in locating at least some of the products on product availability list.

92. The method of claim 85 wherein said product availability list is displayed on said wireless shopping device.

93. The method of claim 85 wherein said product availability list is printed out under the control of a kiosk.

94. The method of claim 85 wherein said wireless shopping device includes a reader for reading a product identification code.

95. The method of claim 94 further comprising the step of providing an indication when a product identification code of a product on said product availability list is read by said wireless shopping device.

96. The method of claim 94 wherein said electronic shopping list is at least partly generated by reading a product identification code in an advertisement.

97. The method of claim 85 wherein the wireless shopping device comprises:

- a first handheld device having a reader for registering the product identification code; and
- a second device having a video display secured to a shopping cart.

98. The method of claim 97 wherein said step of providing said product availability list comprises displaying said list on said video display.

99. In a self-service shopping checkout system wherein a shopper uses a portable terminal for scanning of a bar code of an item selected for purchase and wherein items selected for purchase are deposited in a plurality of shopping bags, and wherein a list of items self-scanned by the shopper is compiled, the improvement comprising a method for performing a security check to determine if the shopper has failed to scan an item deposited into the shopping bags, said method comprising the steps of:

- selecting from the shopping bags one or more items to be scanned by a clerk;
- scanning a barcode located on each of said items selected for scanning;

- c) determining a weight associated with each of the items on said list that were not scanned by the clerk;
- d) determining a net weight of each shopping bag, said net weight of each shopping bag being associated with a weight of each shopping bag without the items selected for scanning;
- e) comparing the net weight of each shopping bag with the weight of the items on said list that were not scanned by the clerk; and
- f) disallowing the shopping transaction if said comparison step indicates that the net weight of any of the shopping bags could not be attained from the weight of the items on said list that were not scanned by the clerk.

100. The method of claim 99 wherein said step of determining the net weight of each shopping bag comprises determining a weight associated with each shopping bag, determining a weight associated with each of the items selected for scanning and deducting from the weight of each shopping bag the weight of each of the items selected for scanning within the respective shopping bags.

101. The method of claim 99 wherein said step of determining the net weight of each shopping bag comprises measuring the weight of each shopping bag after removing the items selected for scanning.

102. The method of claim 99 further including the step of determining if the item selected for scanning is present on said list of items self-scanned by the shopper.

103. The method of claim 99 further comprising the step of determining probability that the net weight of any of the shopping bags could be attained from the weight of the items on said list that were not scanned by the clerk.

104. The method of claim 103 further comprising the step of disallowing the shopping transaction if said probability is less than an acceptable level.

105. The method of claim 104 wherein said acceptable level is based at least in part on a security record of the shopper.